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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/636,166	08/06/2003	Sung-Soon Park	4327P001C2	3596
8791	7590	08/09/2005	EXAMINER	
BLAKELY SOKOLOFF TAYLOR & ZAFMAN 12400 WILSHIRE BOULEVARD SEVENTH FLOOR LOS ANGELES, CA 90025-1030			METZMAIER, DANIEL S	
			ART UNIT	PAPER NUMBER
			1712	

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/636,166

Applicant(s)

PARK ET AL.

Examiner

Daniel S. Metzmaier

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1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>08/06/2003</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Claims 1-3 are pending.

#### ***Drawings***

1. The drawings were received on August 6, 2003. These drawings are acceptable.

#### ***Specification***

2. The disclosure is objected to because of the following informalities: the status of the parent application is required to be updated in the cross-noting section of the specification.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Giannellis et al, US 5,219,611. Giannellis et al (column 3, line 44; to column 5, line 30; particularly column 5, lines 19-30) discloses methods reading on the instant methods wherein the sol-gel reaction product is aged at a temperature of 25° to 65° C for a time period ranging from 0.75 to 2.5 hours followed by dilution if the gels formed are too viscous for coating.
5. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Ashley et al, US 4,966,812. Ashley et al (example 1) discloses the claimed methods. The

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claimed methods require: (1) "subjecting a solution of an alkoxide to hydrolyzation and condensation in a reaction system"; (2) "aging the solution to form a sol-gel reaction product"; and (3) "diluting the reaction product". Said methods employ open transitional language, i.e., "comprising". Ashley et al (example 1) discloses aging at 50° C for 2 to 3 weeks followed by dilution. If the compositions were aged for 2 to 3 week to form a gel, said compositions would necessarily be aged for 1 to 24 hours. Applicants' claims do not exclude further aging and/or further process steps, e.g., aging.

6. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Volpe, US 5,510,147. Volpe (example 1) discloses the claimed methods. The claimed methods require: (1) "subjecting a solution of an alkoxide to hydrolyzation and condensation in a reaction system"; (2) "aging the solution to form a sol-gel reaction product"; and (3) "diluting the reaction product". Said methods employ open transitional language, i.e., "comprising".

### ***Double Patenting***

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1-3 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 9-20, particularly claim 16, of U.S. Patent No. 6,638,630. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims encompass patentees' claims and/or the instant claims are generic to the patented specie method claims. The genus anticipates the specie. Further, the instant claims do not exclude the further method steps by their use of open transitional language, i.e., "comprising".

It is further noted that the formation of "a coating solution", recited in applicants' preamble is inherently formed in patentees' processes claimed. This is clearly evident by the fact that patentees' process forms a "sol-gel" product and coats said product in a subsequent step.

Furthermore, US 6,638,630 corresponds to serial number 09/991,765, which is the parent application to the instant application and no restriction was made therein.

9. Claims 1-3 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 10-20, particularly claim 17, of U.S. Patent No. 6,372,354. Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims encompass patentees' claims and/or the instant claims are generic to the patented specie method claims. The genus anticipates the specie. Further, the instant claims do not exclude the further method steps by their use of open transitional language, i.e., "comprising".

It is further noted that the formation of "a coating solution", recited in applicants' preamble is inherently formed in patentees' processes claimed. This is clearly evident

by the fact that patentees' process forms a "sol-gel" product and coats said product in a subsequent step.

Furthermore, US 6,372,354 corresponds to serial number 09/394,987, which is the parent application to the instant application and no restriction was made therein.

### ***Conclusion***


10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Brinker et al, US 5,948,482, is of particular interest and teaches (column 3, lines 42 et seq) the advantages of aging the sol and/or gels and the temperatures for sol-gel processing.

EP 1 022 587 was cited in the Search Report as an X reference for claims 1-29. Claims 19-21 of the PCT substantially correspond to the instant claims 1-3. While EP 1 022 587 discloses the formation of inorganic oxide particles by sol-gel methods (paragraph [0107]) and the use of ortho-alkoxides (paragraph [0135]), the reference does not explicitly disclose the steps required in instant claims 1-3.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (571) 272-1089. The examiner can normally be reached on Monday to Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**Daniel S. Metzmaier**  
**Primary Examiner**  
**Art Unit 1712**

DSM